



UniGene

ORGANIZED VIEW OF THE TRANSCRIPTOME

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UGID:675343 UniGene Hs.460184 Homo sapiens (human) MCM4

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**Minichromosome maintenance complex component 4 (MCM4)**

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**SELECTED PROTEIN SIMILARITIES**

Comparison of sequences in UniGene with selected protein reference sequences. The alignments can suggest function of a gene.

	Reference Protein	Species	Id (%)	Len (aa)
XP_528129.2	PREDICTED: minichromosome maintenance protein 4	<i>P. troglodytes</i>	100.0	862
NP_877423.1	minichromosome maintenance complex component 4	<i>H. sapiens</i>	100.0	862
NP_032591.2	minichromosome maintenance complex component 4	<i>M. musculus</i>	98.1	861
NP_001081448.1	cdc21 protein	<i>X. laevis</i>	92.8	862
NP_944595.1	MCM4 minichromosome maintenance deficient 4, mitotin	<i>D. rerio</i>	88.9	749
NP_477185.1	disc proliferation abnormal CG1616-PA	<i>D. melanogaster</i>	76.1	865
NP_490962.1	yeast MCM (licensing factor) related family member (mcm-4)	<i>C. elegans</i>	69.0	815
XP_001700810.1	minichromosome maintenance protein 4	<i>C. reinhardtii</i>	62.5	543
NP_179236.3	DNA replication licensing factor, putative	<i>A. thaliana</i>	59.6	844
NP_015344.1	Essential helicase component of heterohexameric MCM2-7 complexes which bind pre-replication complexes on DNA and melt the DNA prior to replication; accumulates in the nucleus in G1; homolog of S. pombe Cdc21p; Mcm4p	<i>S. cerevisiae</i>	57.4	932
XP_331738.1	hypothetical protein	<i>N. crassa</i>	57.2	995

**GENE EXPRESSION**

Tissues and development stages from this gene's sequences survey gene expression. Links to other NCBI expression resources.

Expression Profile: View expression levels using UniGene's EST ProfileViewer

[Show more entries with profiles like this]

Note: Highly represented (9.1 pct) in cDNA library dbEST:3374, HT0268.

GEO profiles: Gene expression profiles in the NCBI Gene Expression Omnibus database

cDNA Sources: testis; brain; embryonic tissue; mixed; mouth; skin; lymph node; intestine; uncharacterized tissue; placenta; ovary; kidney; uterus; cervix; stomach; epididymis; pancreas; heart; salivary gland; bladder; thyroid; spleen; trachea; tonsil; ascites; lymph; lung; thymus; liver; mammary gland; eye; bone marrow; connective tissue; esophagus;

**EXHIBIT**

9a

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prostate; blood; adrenal gland; bone; muscle; vascular;  
larynx; amniotic fluid

**MAPPING POSITION**

*Genomic location specified by transcript mapping, radiation hybrid mapping, genetic mapping or cytogenetic mapping.*

Chromosome:	8	
Map position:	8q11.2	
UniSTS entry:	Chr 8	RH80868
UniSTS entry:	Chr 8	SHGC-35380
UniSTS entry:		MCM4
UniSTS entry:		RH102573
UniSTS entry:		G35510
UniSTS entry:	Chr 8	STS-N27515

**SEQUENCES**

*Sequences representing this gene; mRNAs, ESTs, and gene predictions supported by transcribed sequences.*

**mRNA sequences (9)**

<u>NM_005914.2</u>	Homo sapiens minichromosome maintenance complex component 4 (MCM4), transcript variant 1, mRNA	P
<u>NM_182746.1</u>	Homo sapiens minichromosome maintenance complex component 4 (MCM4), transcript variant 2, mRNA	P
<u>CR606514.1</u>	full-length cDNA clone CS0DK011YN01 of HeLa cells Cot 25-normalized of Homo sapiens (human)	P
<u>CR598188.1</u>	full-length cDNA clone CS0DJ012Y118 of T cells (Jurkat cell line) Cot 10-normalized of Homo sapiens (human)	P
<u>AK022899.1</u>	Homo sapiens cDNA FLJ12837 fis, clone NT2RP2003228, highly similar to H.sapiens P1-Cdc21 mRNA	P
<u>AM493756.1</u>	Homo sapiens partial mRNA for minichromosome maintenance protein 4 (MCM4 gene) isolated from bone marrow	P
<u>X74794.1</u>	H.sapiens P1-Cdc21 mRNA	PA
<u>AK309812.1</u>	Homo sapiens cDNA, FLJ99853	P
<u>BC031061.1</u>	Homo sapiens minichromosome maintenance complex component 4, mRNA (cDNA clone MGC:33310 IMAGE:5273457), complete cds	PA

**EST sequences (10 of 812) [Show all sequences]**

<u>AA978201.1</u>	Clone IMAGE:1578660	mixed	3' read P
<u>AA992118.1</u>	Clone IMAGE:1622043	embryonic tissue	3' read P
<u>AA992744.1</u>	Clone IMAGE:1623457	embryonic tissue	3' read P

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AI004065.1	Clone IMAGE:1619903	testis	3' read <b>P</b>
AA921783.1	Clone IMAGE:1543478	mixed	3' read <b>P</b>
AI039224.1	Clone IMAGE:1658029	embryonic tissue	3' read <b>A</b>
AI039402.1	Clone IMAGE:1658818	embryonic tissue	3' read <b>P</b>
AI050010.1	Clone IMAGE:1699394	kidney	3' read <b>A</b>
AI073482.1	Clone IMAGE:1640256	testis	3' read <b>P</b>
R20801.1	Clone IMAGE:130112	placenta	3' read <b>P</b>

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### Key to Symbols

**P** Has similarity to known Proteins (after translation)  
**A** Contains a poly-Adenylation signal  
**S** Sequence is a Suboptimal member of this cluster  
**M** Clone is putatively CDS-complete by MGC criteria


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